

REMARKS

Claims 1-13 remain pending. Applicants acknowledge with thanks the Examiner's indication of dependent claim 8 being allowable.

Applicants respectfully transverse the Examiner's rejection of the independent claims as obvious over Kondo (EP 0 998 057) in view of either Chambert (U.S. 5,867,791) or Mohebbi (U.S. 6,603,971).

Once again, it is pointed out that the "soft bits" are a very common representation of transmitted data. Several radiocommunication systems use such soft bits, and they are very well known by one skilled in the art. As described in the specification of the present application (p.5, 1.34 – p.6, 1.4), a soft bit can be defined as a measure of probability that a received bit corresponds to a binary value of the transmitted hard bit. For example, a soft bit could be a probability of 90% that a received hard bit was a "1" (and thus a probability of 10% that the received hard bit was a "0").

When uplink macrodiversity is activated, the use of soft bits could be advantageous compared to the use of hard bits, since the combination of soft bits can lead to a better decision than with hard bits. For instance, if two base nodes simultaneously receive a bit from a user equipment, one of them could detect a "0" and the other one could detect a "1" if hard bits are used, which makes the decision uneasy (50%-50%). In contrast, when soft bits are used, one base node could detect a probability of 50% that the transmitted bit was a "0", while the other base node could detect a probability of 100% that the transmitted bit was a "1". In the latter case, it can be decided that a "1" was transmitted with more confidence than in the case of hard bits, since the average probability that the transmitted bit was a "1" is of 75%.

The counterpart of this is that soft bits require more bits than hard bits (single bits), which generates much signaling when transmitted from base nodes to a network controller.

The present invention, as claimed in claim 1, takes advantage of each one of the hard bits and soft bits methods, since a frame of hard bits is transmitted to the network controller from a base node whose accuracy indicator has a good level (which means that it contains few errors), whereas a frame of soft bits is transmitted to the network controller from at least two base nodes if no accuracy indicator has the good level (which means that every frame of hard bits contains many errors). In this way, only a low number of bits is transmitted to the network controller when the latter can rely on it, and, at the opposite, accurate decisions can be made by use of frames of soft bits, when the frames of hard bits are not reliable enough (see also p.3, 1.29 – p.4, 1.7 of the present application).

As acknowledged with the Examiner during a conference call dated July 22, 2005, Kondo does not disclose that base stations could generate frames of hard bits and frames of soft bits. Moreover, the frames obtained in each base station are systematically transmitted to the base station controller, in order to be stored in respective data buffers (see Fig. 5 for instance). The base station controller itself determines a new frame from the frames transmitted by each base station. In that, there is no selective transmission of either frames of hard bits or frames of soft bits by the base stations. Therefore, the teaching of Kondo is quite far away from the present invention.

As to Chambert, it discloses a method for transmitting blocks of (most probably hard) bits only from the base station whose quality measure is the best (see Q1 and Q2 in the described example). In Chambert, quality measures are said to be the number of bytes in a block that contained an error that was not correctable, the number of bytes in a block that contained non-correctable errors, a combination thereof, or a channel estimate (col. 2, 1.26-32). Such quality measures thus give information on the quality of the radio transmission between the mobile station and the corresponding base station. But, in no way, it is representative of the value of the

bits received from the mobile station. To put it briefly, the fact that a received block (including several bits) contains a number n of errors does not give any indication of whether the corresponding transmitted bits were "0s" or "1s". Therefore, the quality measures cannot be confused with soft bits.

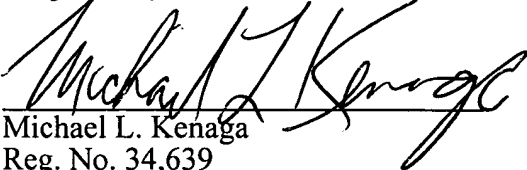
It can be noted that even with this erroneous interpretation, according to which the quality measures of Chambert would be soft bits, Chambert would thus teach that soft bits are systematically sent from each base station to the network, whereas only one block of hard bits (BL2 in Fig. 2) would be sent from one base station (BS2 in Fig. 2), depending on the value of said transmitted soft bits. This is the opposite of the present invention, in which soft bits are sent to a network controller only when hard bits are not reliable enough, in order to limit the transmission of signaling to the network. Moreover, with this interpretation, no accuracy indicator would thus be used in Chambert, since of course Q1 and Q2 cannot be at the same time soft bits and accuracy indicators.

It is thus very clear that Chambert is not relevant to the subject-matter of claim 1 of the present application. Another interpretation would result from an abusive reading of the document, going far beyond its real teaching.

For these reasons, it is respectfully requested that the rejections against claim 1 based on Kondo and/or Chambert have been overcome.

The same applies to the independent claims 9 and 11. The other claims are acceptable as well, in particular since they depend on claim 1, 9 and 11, directly or indirectly.

Respectfully submitted,


Michael L. Kenaga
Reg. No. 34,639

DLA PIPER RUDNICK GRAY CARY LLP
P.O. Box 64807
Chicago, Illinois 60664-0807
Phone: 312/368-4000
Customer No.: 28465